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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/796,206 | 03/10/2004 | Ju-Yeon Lee | 0465-1159P | 2419 |
| 2292 | 7590 | 03/28/2006 | EXAMINER | |
| BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747 | | | ALI, MOHAMMAD M | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3744 | |

DATE MAILED: 03/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/796,206

Applicant(s)

LEE, JU-YEON

Examiner

Mohammad M. Ali

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-4, 6-9, 11, 13,14, 16-17, 19 -24, 26-29 and 30-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Santilli et al., (5,655,374). Santilli et al., disclose a surgical suit with a wearable cooler comprising a thermoelectric module 78 providable on clothes/suit 10 or (on clothes of a user) for absorbing and discharging heat according to an electric current; at least one first heat sink 84 provided at a first side of the thermoelectric module 78; at least one second heat sink 80 provided at a second side of the thermoelectric module 78, the second side being opposite of the first side; and at least one fan 90 provided at the first side of the thermoelectric module 78 for causing air to flow through the at least one first heat sink, wherein the at least one fan 90 is placed directly above the corresponding at least first heat sink 84; a second fan 76 provided at the second side of the thermoelectric module 78 for causing air to flow through the second heat sink 80; and external case having at least one air inlet 66, and at least one air outlet 70, and surrounding the at least first heat sink 84 and the at least one first fan 90, contact guard (the fans 90, 76 supports), a projection part/vertical wall 74, heat sinks cavity portions (where the fans 90 and 76 are reside located), a electric control switch 136 (controlling fan, and air-conditioning)

. See Fig.1-4.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Santilli et al. Santilli et al., disclose the invention substantially as claimed as stated above. However Santilli et al., do not disclose location of heat sink outside of the clothes. Location of the heat sink either inside the cloth or outside the cloth is a mere design choice and there is no criticality or unexpected result for it.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Santilli et al., in view of Bell et al. (20030029173). Santilli et al., disclose the invention substantially as claimed as stated above. However, Santilli et al., do not disclose adjustable air outlet. Bell et al., teach the use of adjustable louver 121 in a thermoelectric cooler for the purpose of controlling the conditioned air according the

user need. See Fig.1. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the surgical suit of Santilli et al., in view of Bell et al., such that an adjustable louver could be provided in order to control the direction of air flow as per need of a user.

Claims 15 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Santilli et al., in view of Feher (4,777,802). Santilli et al., disclose the invention substantially as claimed as stated above. However, Santilli et al., do not disclose a centrifugal fan and a fan directly below the second heat sink. Feher teaches the use of centrifugal 47 which is directly below a second heat exchanging surface 70 with fins/heat sink 78 in a Peltier heat exchanging system for the purpose of exchanging heat and directing the air over the heat sink. See Fig. 16. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the surgical suit of Santilli et al., in view of Feher such that a centrifugal fan disposed directly above the second heat sink could be provided in order to exchanging heat and directing air over the second heat sink.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Santilli et al., in view of Balkind et al., RU 2122658 C1. Santilli et al., disclose the invention substantially as claimed as stated above. However, Santilli et al., do not disclose a gauze. Balkind et al., teach the use of gauze which is directly below a second heat exchanging surface 70 with fins/heat sink in a thermoelectric heat exchanging system for the purpose of observing pressure of air exchanging heat and directing the air over the heat sink. See translated abstract. Therefore, it would have been obvious to one

having ordinary skill in the art at the time the invention was made to modify the surgical suit of Santilli et al., in view of Balkind et al., such that a gauze could be provided in order to observe the pressure of air flow exchanging heat.

Response to Arguments

Applicant's arguments filed 01/31/06 have been fully considered but they are not persuasive. The Applicant argued, "However, the surgical suit is not designed to heat the wearer". The Examiner disagrees. Heat is nothing but a thermodynamic term to mean, "Heat energy" and it can be termed both hot or cold. On the other hand in case of need by a user the cold and hot side can be reversed by changing electric current direction and this feature is well known for a thermo electric device. Again, The Applicant argued that the heat abstraction plate 80 is not a heat sink. In case of a TEM (thermo electric module) both sides have heat sink (cold or hot). Abstraction plate 80 is a heat sink for the cold side or the TEM 78. abstraction plate cannot abstract heat from air unless a specific heat generated device. The device is the TEM 78 which generates heat (cold or hot) and cold or hot heat is carried by the air when the air passes over the particular (cold or hot) heat sink. Here the abstraction plate 80 works as cold heat sink and air generated by the fan 76 carries the cold heat from the heat sink/abstraction plate 80. The Applicant further argued, "However, it is noted that duct 66 and air outlet 70 is part of the lower formation 60 of the housing 20. ---The lower formation 60 at least surrounds the heat abstraction plate 80, which the Examiner is alleging to be equivalent to the second heat sink as recited. Indeed, just from a simple observation of Fig of Santilli, it is clear that the lower formation 60 cannot surround the heat dissipation plate

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84 nor the fan 90." Examiner disagrees. The term surrounding is very broad. It can be any side of the surrounding side of the case. It does not matter if it on the lower side or upper side of the case. However, Fig. 4 clearly teaches what is meant by the Applicant in his argument. Fan 90 has a cover 64 with air inlet as seen by the arrows towards the fan 90 and it has an air exit (inherent, though the Fig. 4 does not specifically shown the air outlet it must have an air outlet). Therefore, claims 4, 9 and others are not patentable over Santilli et al. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad M. Ali whose telephone number is (571) 272-4806. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


MOHAMMAD M. ALI
PRIMARY EXAMINER